

Figure 1a

Wet Bench: oxide etch + hydrophilic clean (RCA clean)

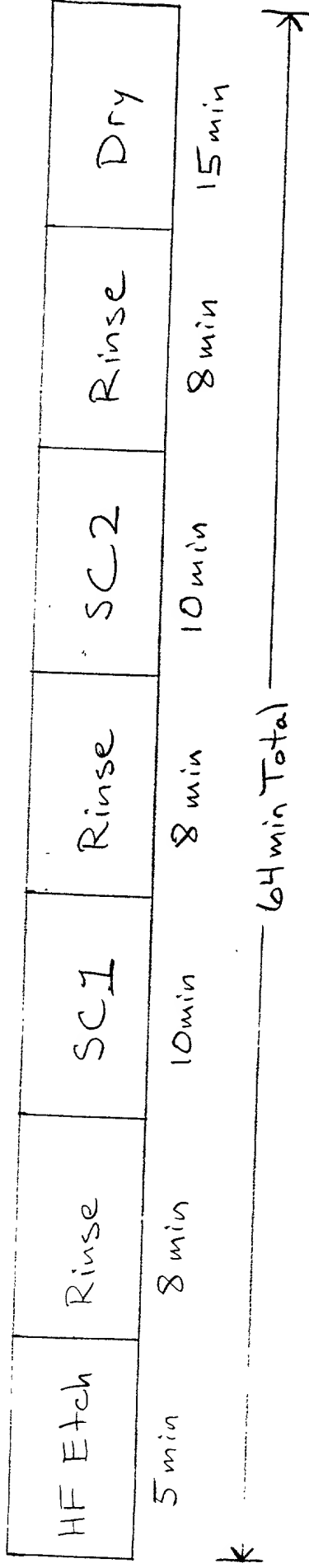


Figure 1b

Single Wafer Cleaning Tool Single Step Clean  
oxide etch + hydrophilic clean

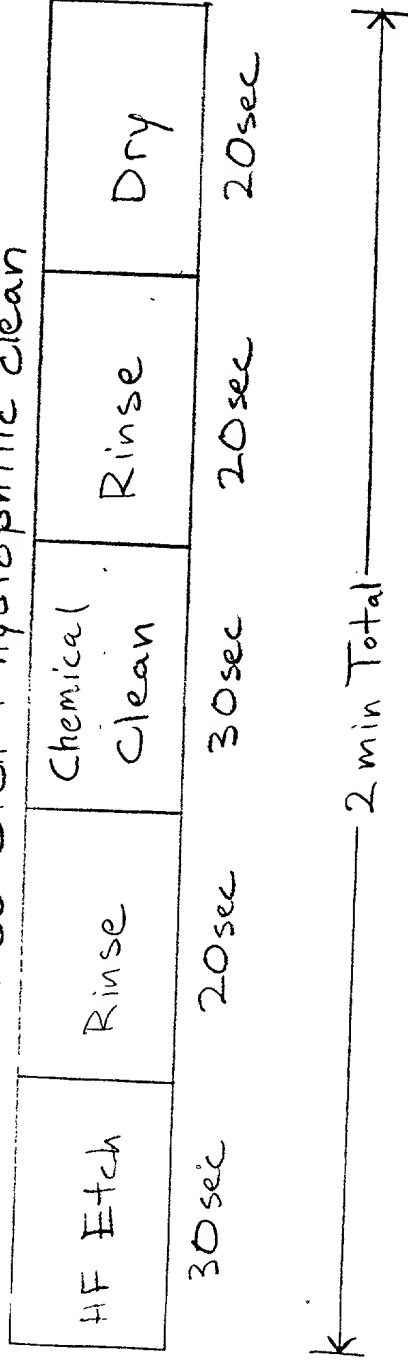
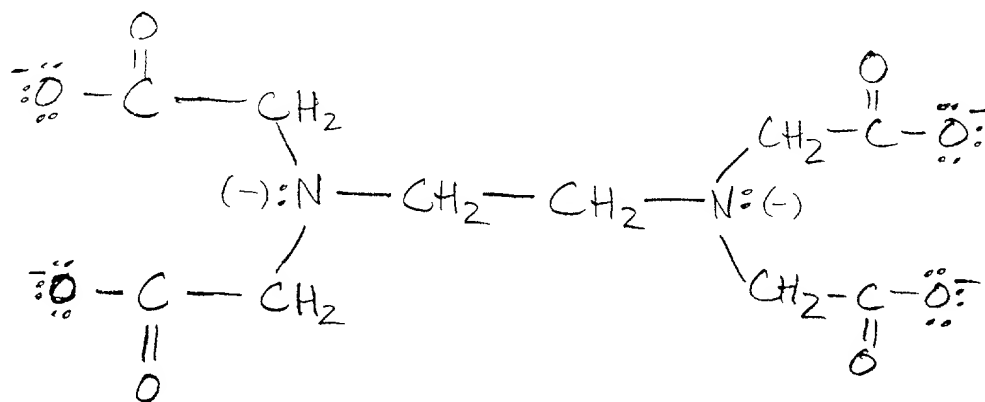
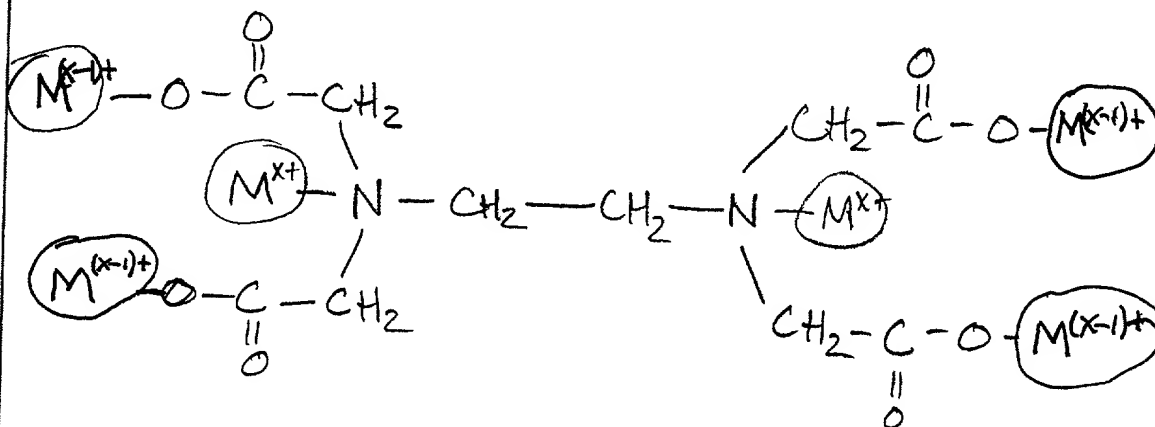


Figure 2 a



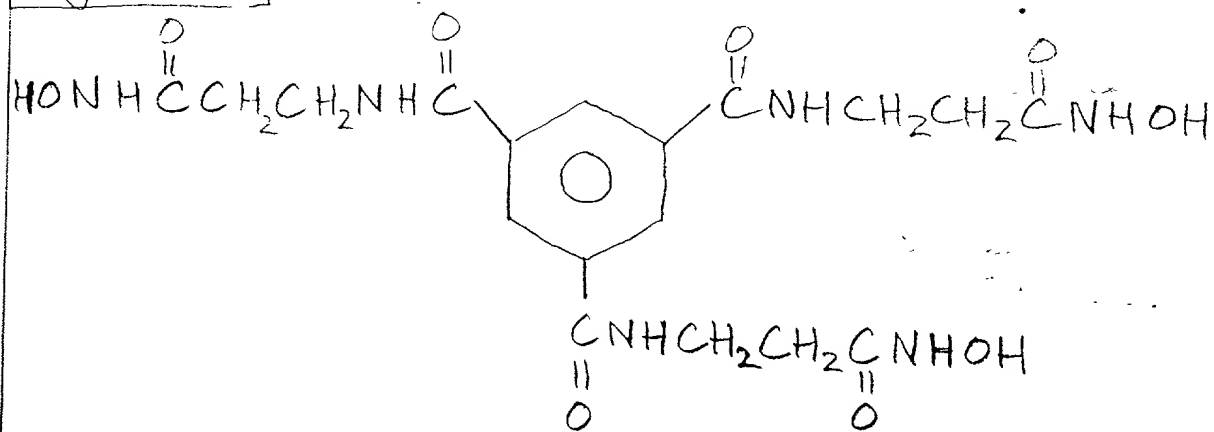
↓ Binds Metal ions

Figure 2 b



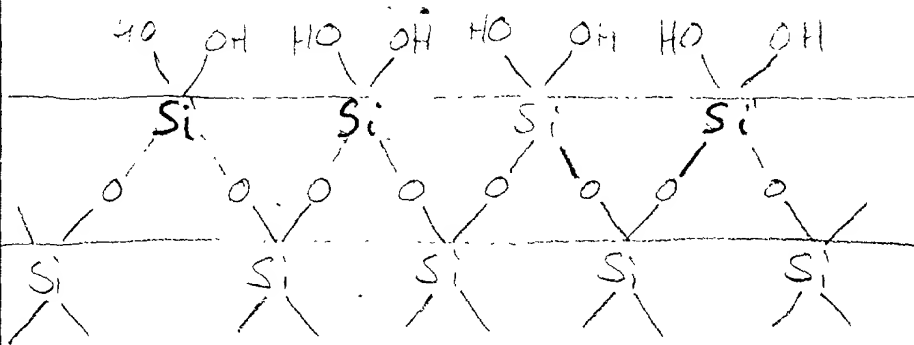


BAMFPH) Figure 3.d



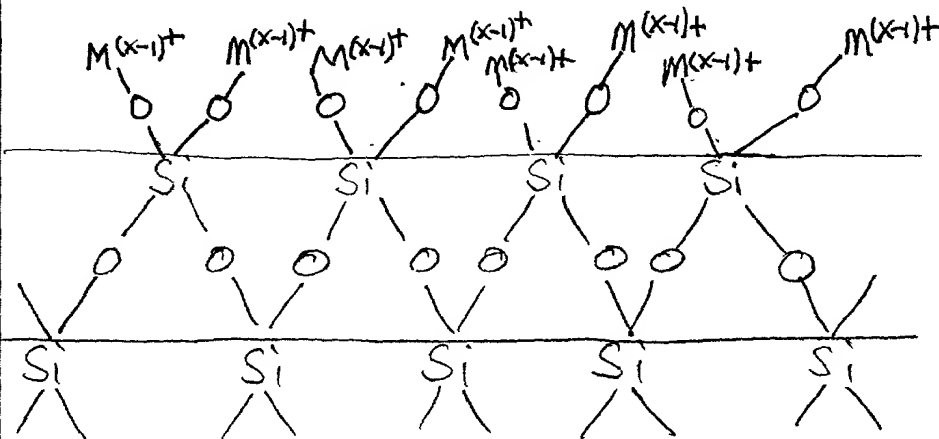
TOPO OF 1560

Figure 4 a



Hydroxide  
terminated  
 $\text{SiO}_2$  film

Figure 4 b



Chemisorption

0941730-062604

Fig. 5

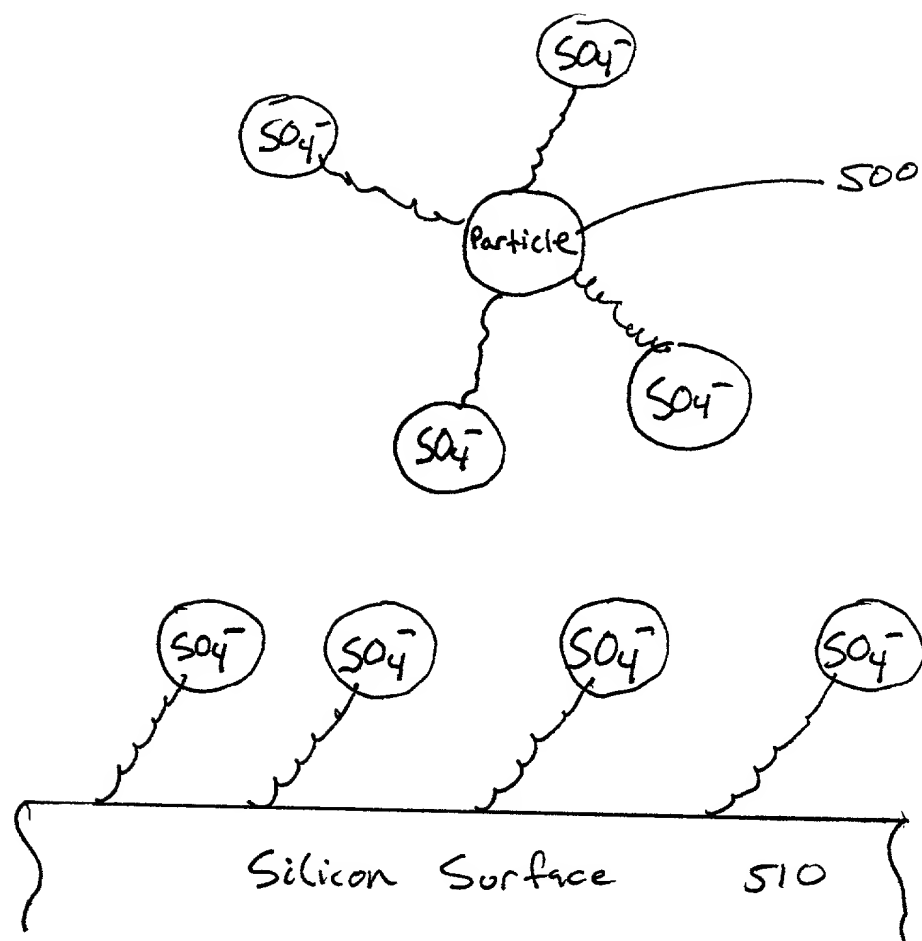


Figure 6a

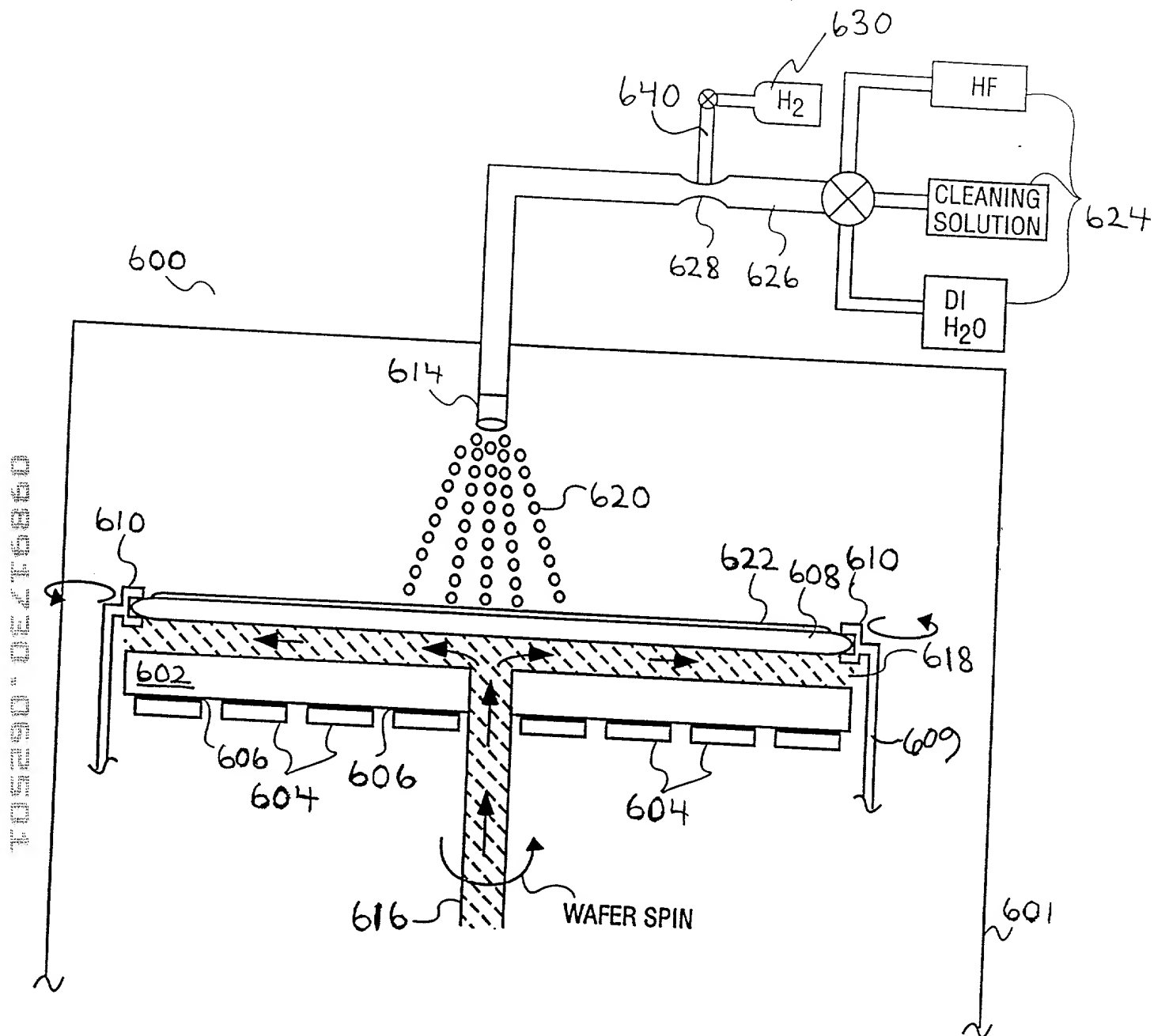


Figure 6b

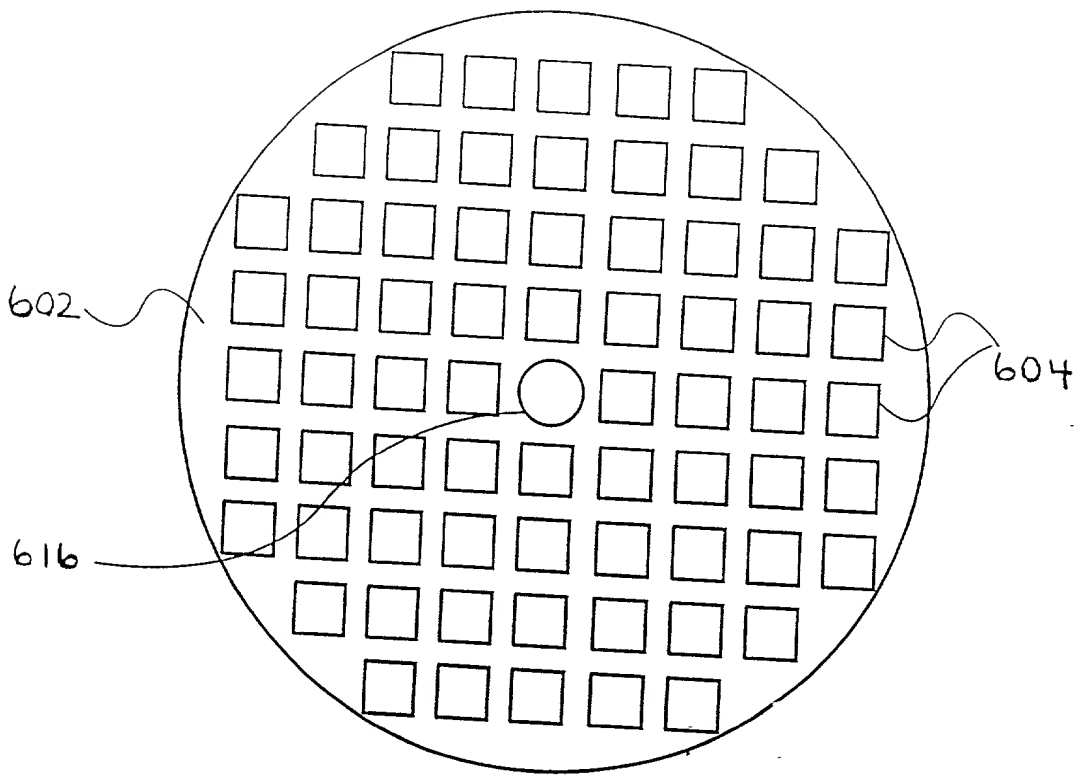


Figure 6c

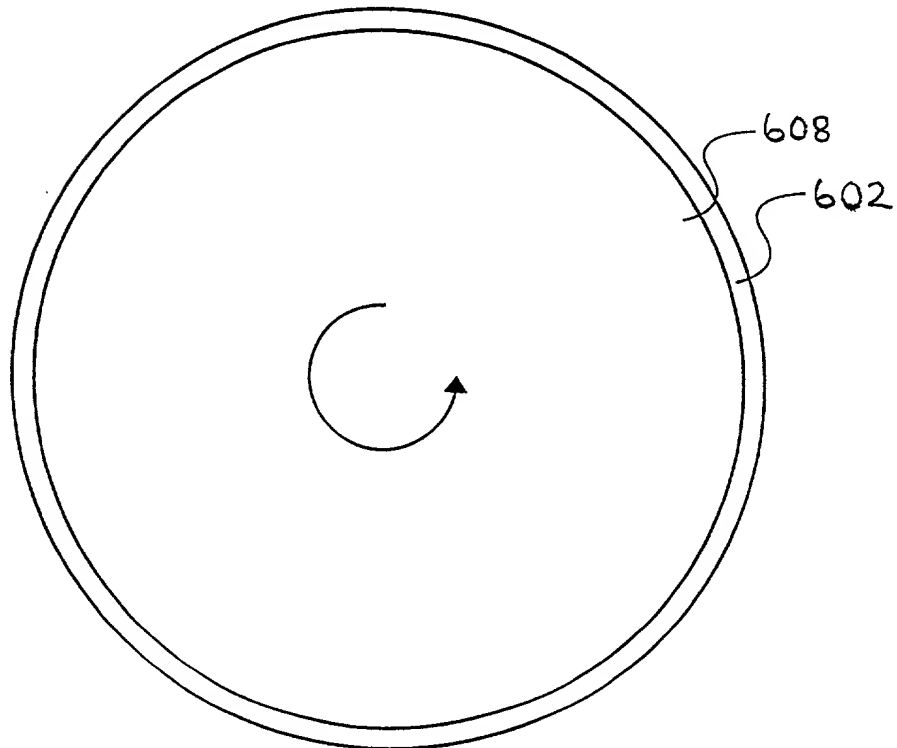




Figure 6d

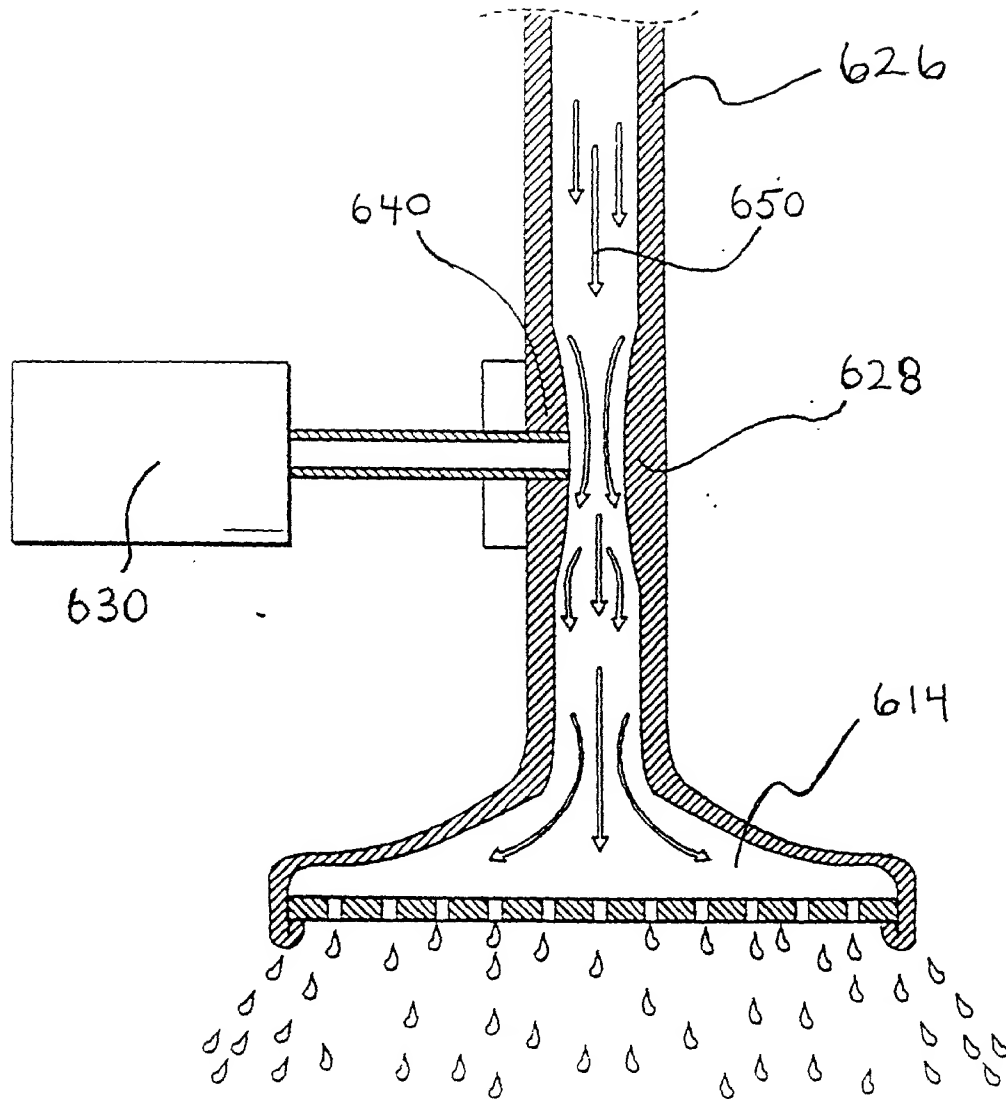


FIG. 6d

FIGURE 7a

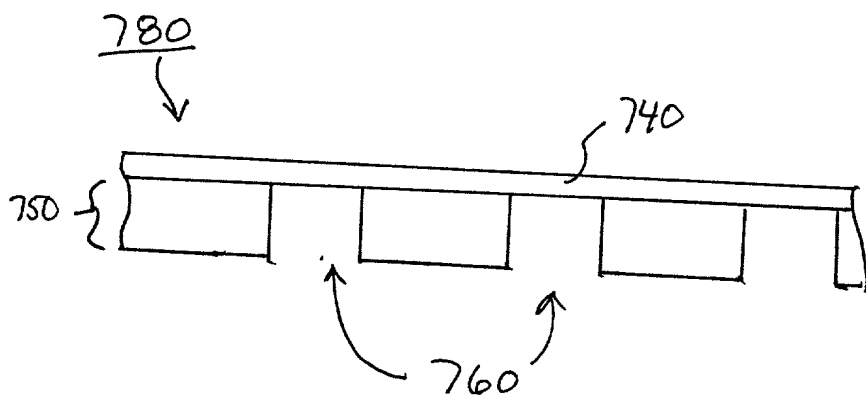
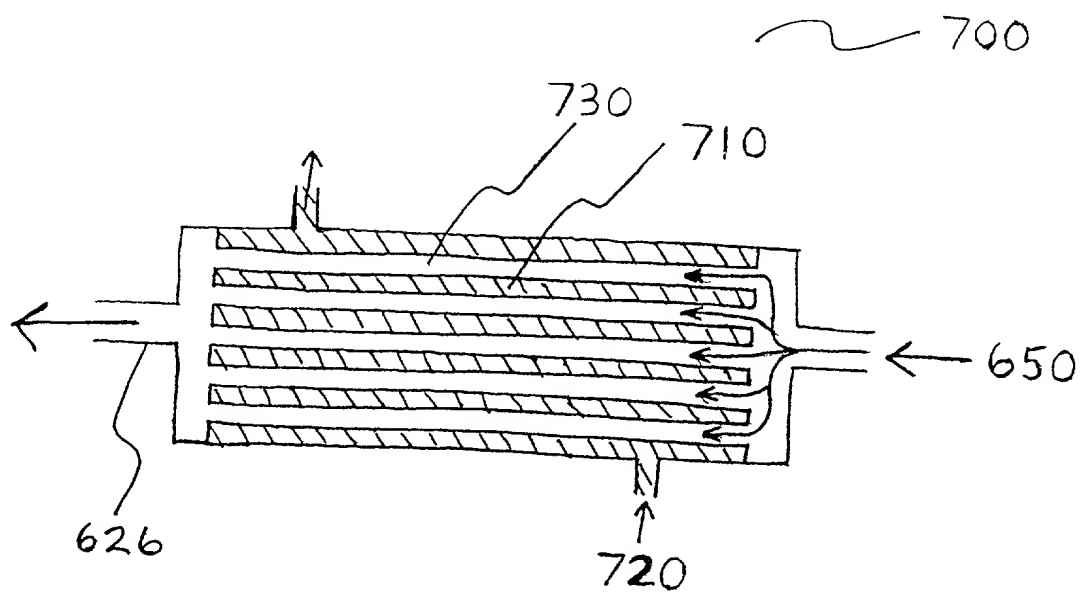


Fig. 7b

Figure 7c

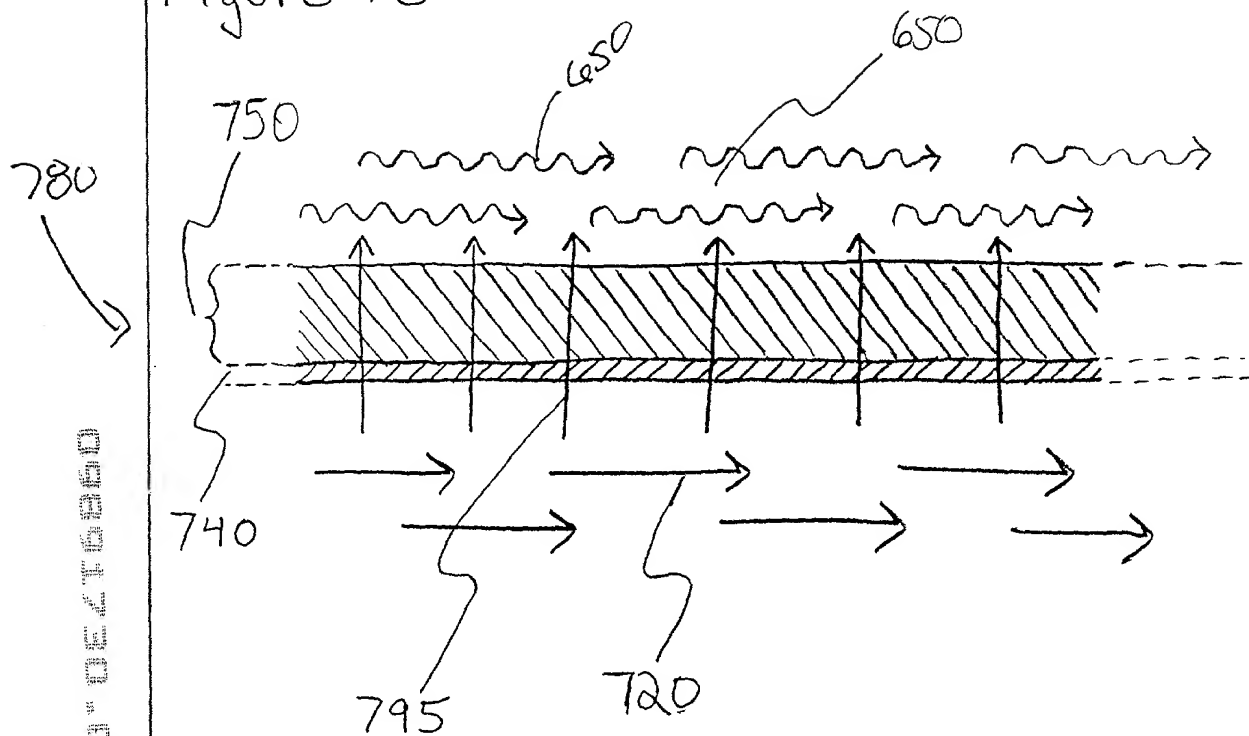


Fig. 8

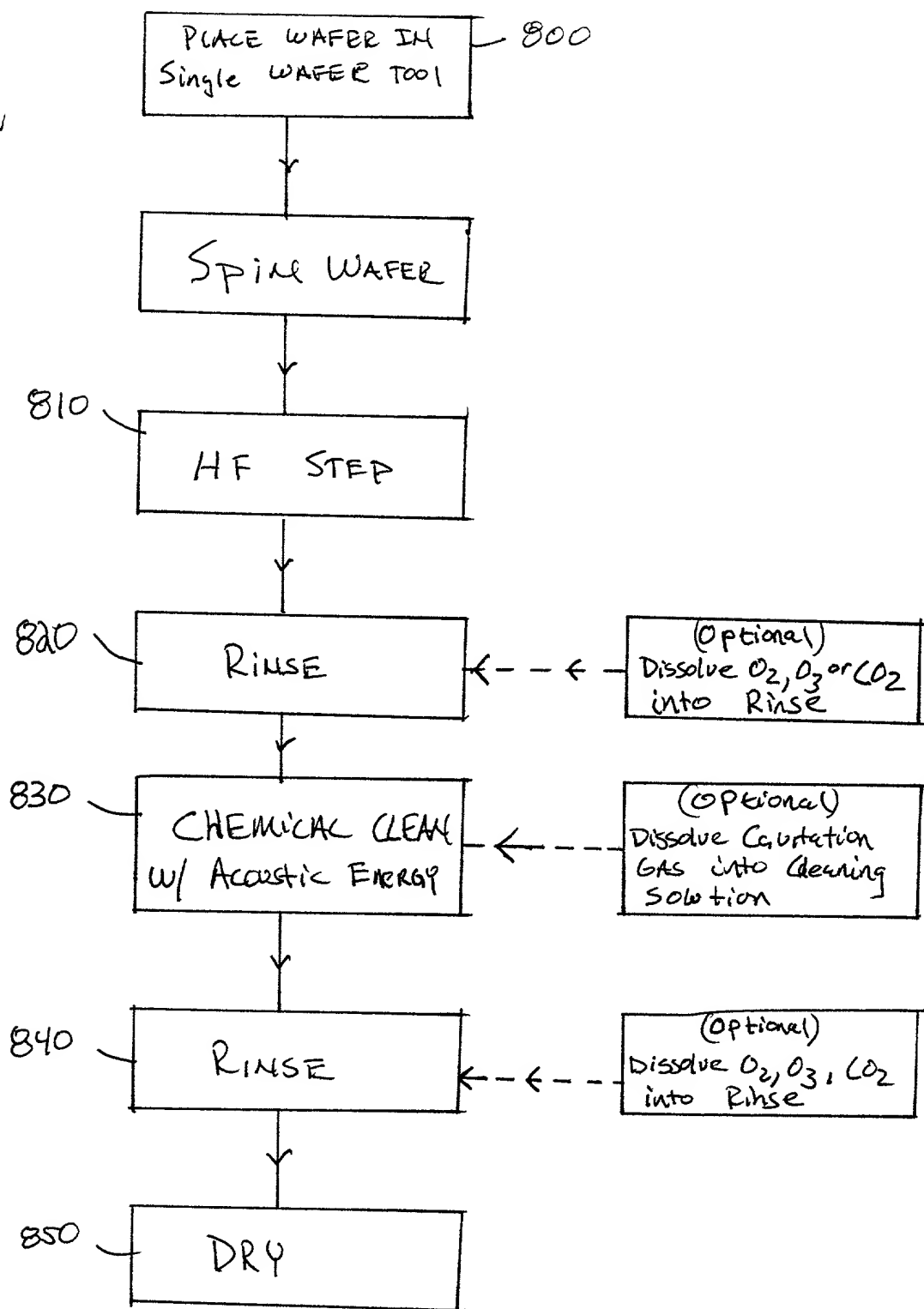
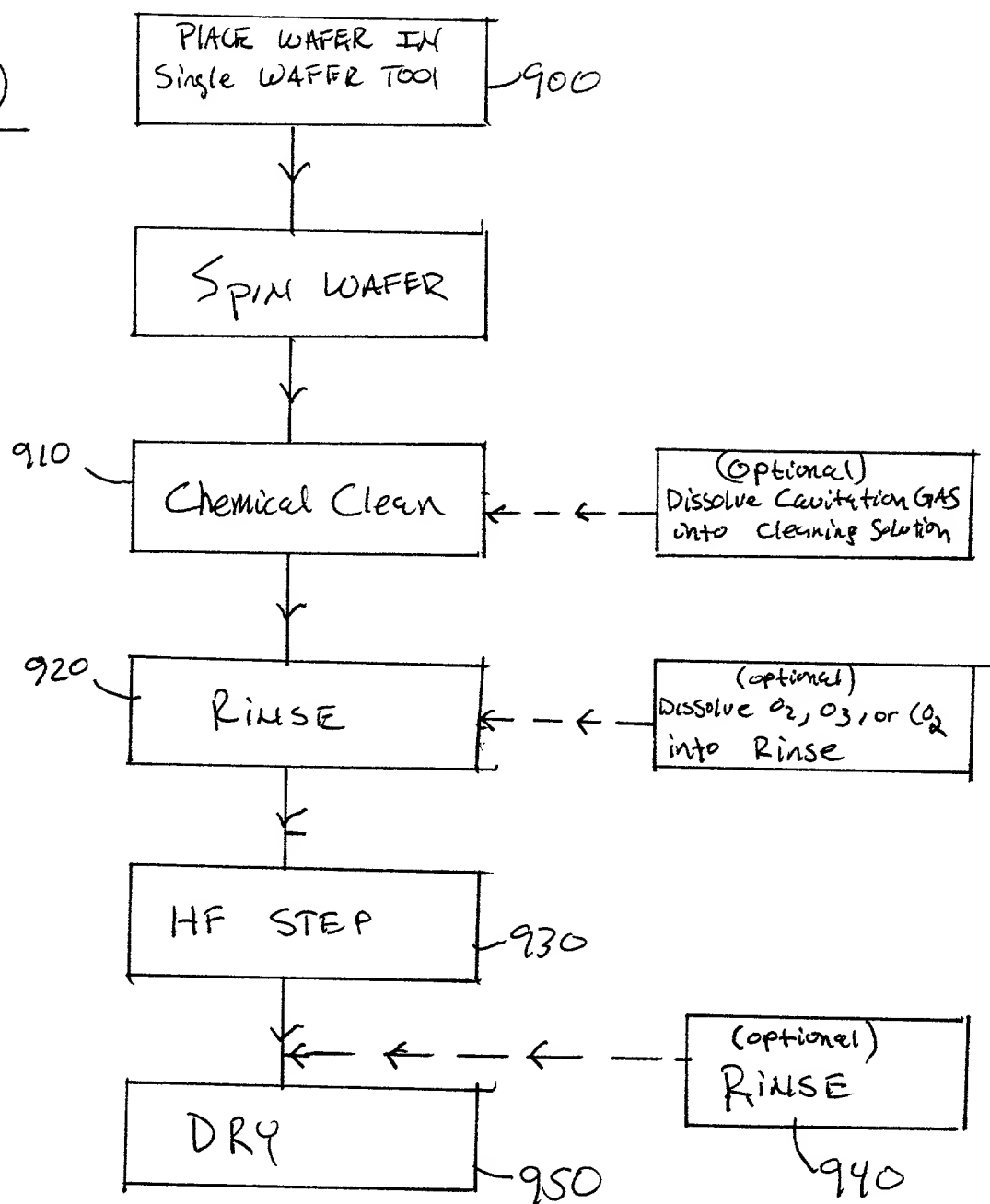


Fig 9



[illegible]

The diagram illustrates two types of silicate polymer chains. The top chain, labeled '1000', consists of a single silicate tetrahedron (SiO<sub>4</sub>) with four hydroxyl (OH) groups. The bottom chain, labeled '1010', consists of a central silicate tetrahedron (SiO<sub>4</sub>) with four silicate tetrahedra attached to its vertices, forming a more complex polymer structure.

$$\begin{array}{ccccccccc}
 \text{H} & \text{H} & & \text{F} & \text{H} & & \text{H} & \text{H} & & \text{F} & \text{H} & & \text{H} & \text{F} \\
 \diagdown & \diagup & & \diagdown & \diagup & & \diagdown & \diagup & & \diagdown & \diagup & & \diagdown & \diagup \\
 \text{Si} & & & \text{Si} & & & \text{Si} & & & \text{Si} & & & \text{Si} & \\
 \diagup & \diagdown & \diagup & \diagdown & \diagup & \diagdown & \diagup & \diagdown & \diagup & \diagdown & \diagup & \diagdown & \diagup & \diagdown \\
 & \text{Si} & & & \text{Si} & & & \text{Si} & & & \text{Si} & & & \text{Si} \\
 \diagdown & \diagup & \diagdown & \diagup & \diagdown & \diagup & \diagdown & \diagup & \diagdown & \diagup & \diagdown & \diagup & \diagdown & \diagup \\
 & & & & & & & & & & & & & 
 \end{array}
 \left. \begin{array}{l} \\ \\ \end{array} \right\} \begin{array}{l} 1020 \\ 1010 \end{array}$$

Fig 11

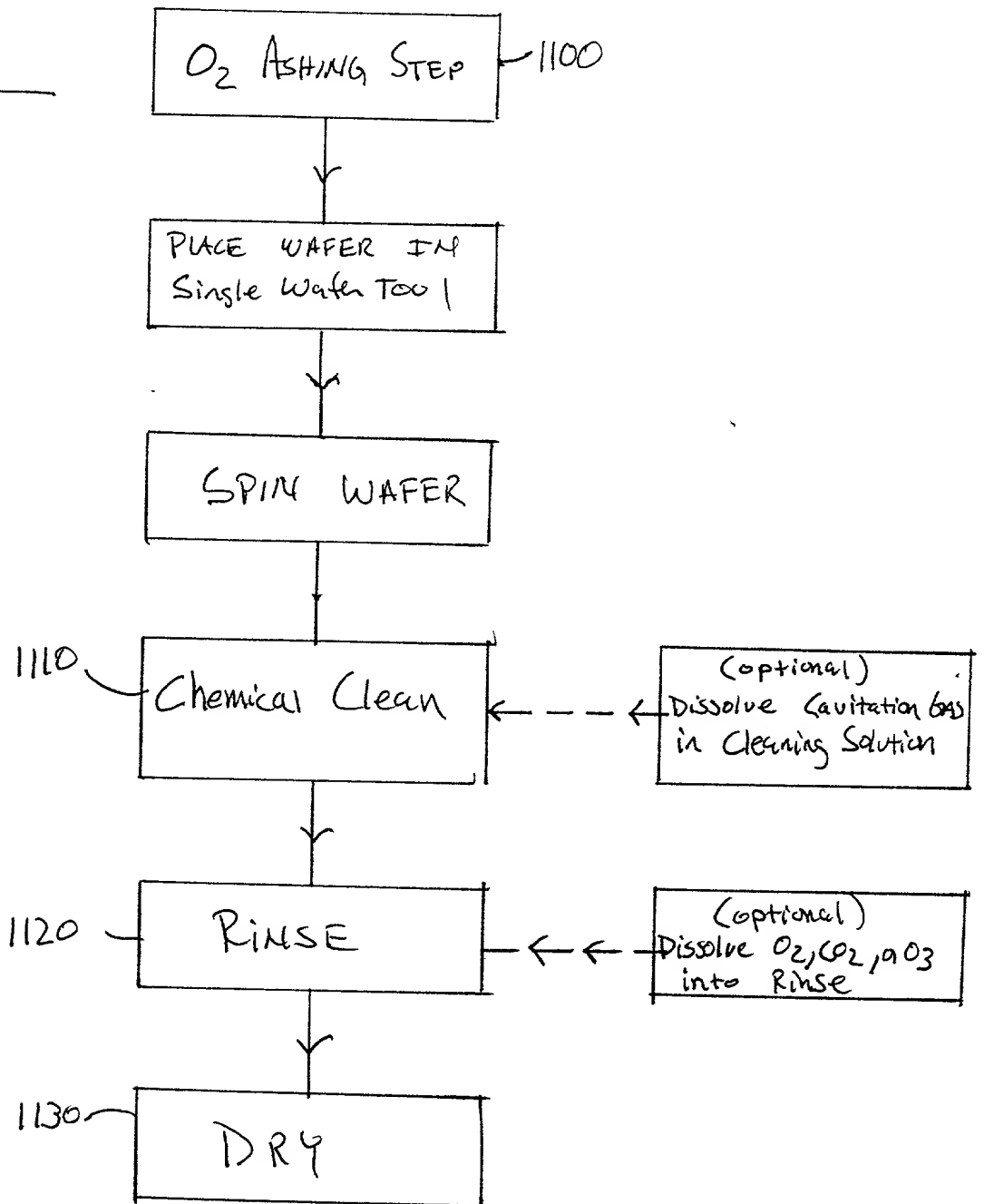


Fig. 12

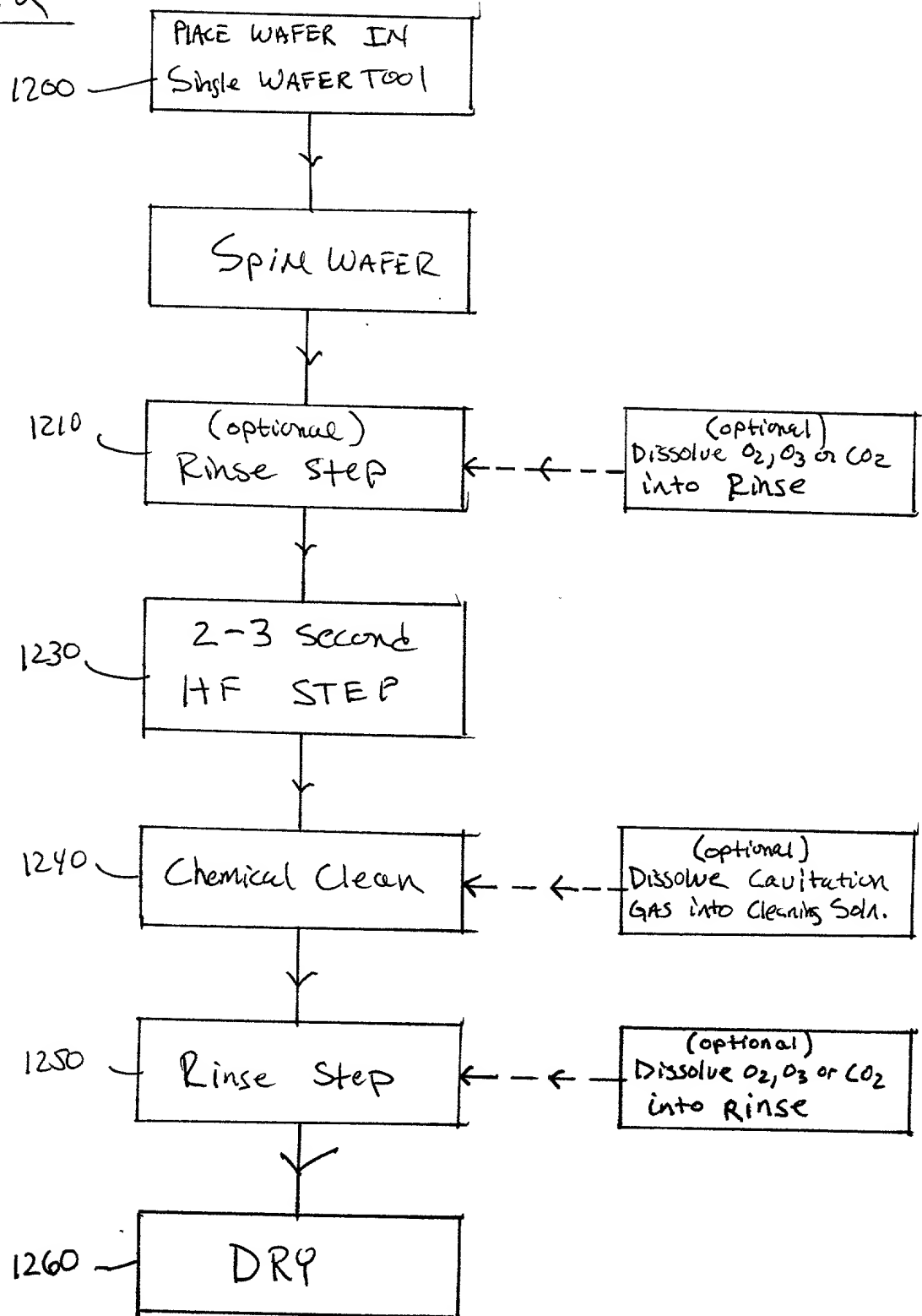




Figure 13a

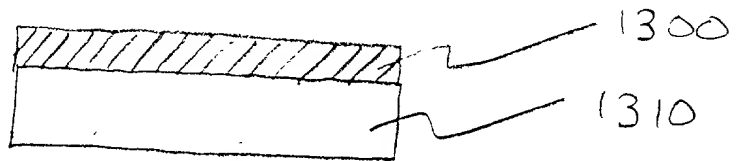


Figure 13b

